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AMENDMENT

JAN 24 2005

Serial No. 10/020,596
Atty. Docket No. GP123-02.UT

Amendments to the Specification

Please amend the paragraph bridging pages 10 and 11 of the specification as follows:

By "polynucleotide" is meant a polymer having two or more nucleoside subunits or nucleobase subunits coupled together. The polynucleotides include DNA and/or RNA or analogs thereof and may further include non-nucleotide groups such as, for example, abasic nucleotides, universal bases (e.g., 3-nitropyrrole and 5-nitroindole), polysaccharides, peptides, polypeptides and/or polyethylene glycol. See, e.g., Becker *et al.*, "Molecular Torches," U.S. Patent No. 6,361,945; Bergstrom *et al.*, "3-Nitropyrrole Nucleoside," U.S. Patent No. 5,681,947; Loakes *et al.* *Nucleic Acids Research* (1995) 23(13):2361-2366; and Arnold *et al.*, "Linking Reagents for Nucleotide Probes," U.S. Patent No. 5,585,481. The sugar groups of the nucleoside subunits may be ribose, deoxyribose and analogs thereof, including, for example, ribonucleosides having a 2'-O-methyl substitution to the ribofuranosyl moiety. (Polynucleotides including nucleoside subunits having 2' substitutions which are useful as polynucleotide probes are disclosed by Becker *et al.*, "Method for Amplifying Target Nucleic Acid Using Modified Primers," U.S. Patent No. 6,130,038.) The nucleoside subunits may be joined by linkages such as phosphodiester linkages, modified linkages or by non-nucleotide moieties which do not prevent hybridization of the polynucleotide to its complementary target nucleic acid sequence. Modified linkages include those linkages in which a standard phosphodiester linkage is replaced with a different linkage, such as a phosphorothioate linkage or a methylphosphonate linkage. The nucleobase subunits may be joined, for example, by replacing at least a portion of the natural deoxyribose phosphate backbone of DNA with a pseudo peptide backbone, such as a 2-aminoethylglycine backbone which couples the nucleobase subunits by means of a carboxymethyl linker to the central secondary amine. (DNA analogs having a pseudo peptide backbone are commonly referred to as "peptide nucleic acids" or "PNA" and are disclosed by Nielsen *et al.* in U.S. Patent No. 5,773,571.) Other non-limiting examples of polynucleotides contemplated by the present invention include nucleic acid analogs containing bicyclic and tricyclic

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nucleoside and nucleotide analogs referred to as "Locked Nucleic Acids," "Locked Nucleoside Analogues" or "LNA." (Locked Nucleic Acids are disclosed by Wang, "Conformationally Locked Nucleosides and Oligonucleotides," U.S. Patent No. 6,083,482; Imanishi *et al.* in U.S. Patent No. 6,268,490; and Wengel *et al.*, "Oligonucleotide Analogues," International Publication No. WO 99/14226 ~~U.S. Patent No. 6,670,461.~~) Any nucleic acid analog is contemplated by the present invention provided the modified polynucleotide can form a stable hybrid with a target nucleic acid under hybridization assay conditions and at least a portion of the modified polynucleotide is anionic. In the case of polynucleotide probes, the modified polynucleotide must be capable of preferentially hybridizing to the target nucleic acid under hybridization assay conditions. Unless indicated to be a "probe," a polynucleotide, as used herein, may be a nucleic acid molecule obtained from a natural source which is at least partially single-stranded or which may be rendered partially or fully single-stranded by human intervention.